

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	LUMPKIN	}	EXAMINER:
SERIAL NO.:	10/679,128		ART UNIT: 3723
FILED:	OCTOBER 3, 2003		CONFIRMATION NO.: 2259
TITLE:	SYMMETRIC CLAMP STRUCTURE		

Mail Stop: APPEAL BRIEF
Board of Patent Appeals and Interferences
P.O. Box 1450
Alexandria, Virginia 22313-1450

CORRECTED APPEAL BRIEF

Dear Sir:

In regard to the Notice mailed May 20, 2008, Appellant submits the following Corrected Appeal Brief.

I. REAL PARTY IN INTEREST

The real party in interest is SRAM Corporation. SRAM Corporation's right to take action in the subject application was established by virtue of the following chain of title:

1. An Assignment from the inventor to Avid, LLC recorded at Reel 104582, Frame 0356.
2. An Assignment from Avid, LLC to SRAM Corporation recorded at Reel 014491, Frame 0358.

II. RELATED APPEALS AND INTERFERENCES

The undersigned legal representative of Appellant hereby confirms that there are no known appeals or interferences relating to the present application, or any parent application, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF THE CLAIMS

Claims 1-17 are pending in the application. No claims have been allowed. Claims 1-17 stand rejected under a final Office Action mailed November 16, 2007 for the following reasons:

Claim 10 stands rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1, 4, 6, 8-10 and 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Nielsen, U.S. Patent No. 6,186,027. Claim 7 appears to also be rejected as anticipated by Nielsen (see p. 5 of the final Office Action).

Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nielsen, U.S. Patent No. 6,186,027, in view of Steinbock, U.S. Patent No. 6,381,827.

Claims 2 and 3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gelbein, U.S. Patent No. 5,584,210, in view of Nielsen, U.S. Patent No. 6,186,027, and further in view of Steinbock, U.S. Patent No. 6,381,827.

Claims 1, 4, 5, 11 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gelbein, U.S. Patent No. 5,584,210, in view of Nielsen, U.S. Patent No. 6,186,027.

Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gelbein, U.S. Patent No. 5,584,210, in view of Nielsen, U.S. Patent No. 6,186,027, and further in view of Steinbock, U.S. Patent No. 6,381,827.

Each rejection of each of claims 1-17 is being appealed.

IV. STATUS OF THE AMENDMENTS

No amendment has been filed subsequent to the final rejection. Claims 1-17 are pending as amended by Applicant in the Response to Non-Compliant Amendment filed September 5, 2007, correcting various informalities with respect to the Amendment and Remarks filed June 6, 2007 in response to the Examiner's Office Action mailed March 9, 2007. The claims 1-17 set forth in Section VIII accurately reflect the claims pending.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claims are generally directed to a clamp structure, a method of attaching a clamp to a frame with the clamp structure, a method of manufacturing the clamp structure and a bicycle brake lever including the clamp structure. Claims 1, 6, 10 and 11 are independent claims. No claim includes means plus function elements as permitted by 35 USC § 112, paragraph six.

Claim 1 as currently pending recites a clamp structure comprising a first arm having a distal end defining a first threaded through bore and a second arm having a distal end defining a second threaded through bore, wherein the first threaded through bore and the second threaded through bore are essentially coaxial. A screw comprises a head and a shank, with the head being at one end of the shank and the shank having a threaded portion at a second end opposite the first end. The screw further includes a clearance portion between the threaded portion and the head. The screw is configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second threaded through bores. The structure recited in claim 1 provides a clamp wherein the screw can be inserted into either the first or second through bores of the first and second arms, respectively, and still perform a clamping function. This structure has the advantage of allowing the clamp to function in the event either of the first or second threaded through bores becomes stripped simply by inserting the screw into the opposite through bore.

Claims 2 and 3 further recite limitations directed to the diameter and length of the clearance portion of the screw relative to each of the threaded bores.

Claims 4 and 5 recite the clamp structure connected to a bicycle component and more particularly the bicycle component being a brake lever.

Independent claim 6, which is directed to a method of attaching a clamp to a frame, recites a similar structure discussed above with respect to claim 1, and includes the step of engaging the screw with the clamp by screwing the threaded portion into a threaded engagement with *either* of the first and second through bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement.

Claims 7 and 8, which depend from claim 6, recite the frame as a tubular cycle frame and more particularly that the frame is a tubular bicycle handlebar.

Claim 9 depends from claim 6 and further recites removing the screw from threaded engagement with either of the first and second arms and engaging and tightening the screw in an opposite orientation such that the screw is threadably engaged with the other arm.

Independent claim 10 recites a method of manufacturing a symmetrical clamp structure configured as recited in claim 1. Significantly, claim 10 recites forming co-axial cylindrical threaded bores through the distal ends of the first and second arms with each threaded bore having a length less than a select length and forming a clearance portion on the shank of a screw configured to threadably engage the threaded bores through the distal ends of the first and second arms, the clearance portion being of the select length between the head and the opposite end of the shank.

Independent claim 11 is directed to a bicycle brake lever comprising a clamp substantially as recited above with regard to claim 1.

Claims 12 and 13 are dependent from claim 11 and further limit the length and the outer diameter of the clearance portion relative to the threaded bores.

Claims 14-17 depend from claim 1, 6, 10 and 11, respectively, and further recite the clearance portion being non-threaded.

The various embodiments recited in independent claims 6, 10 and 11 and their respective dependent claims provide the advantages discussed above with regard to claim 1. Support for these claim elements may be found in the specification and figures as follows:

<p>1. A clamp comprising: a first arm having a distal end defining a first threaded through bore; a second arm having a distal end defining a second threaded through bore, wherein the first threaded through bore and the second threaded through bore are essentially coaxial; and</p>	<p>Page 5, lines 19-24 Fig 2: 12 (clamp) Fig 3: 14 (first arm); 16 (second arm); 18 (first threaded through bore); 20 (second threaded through bore) Figs 3-4B: illustrate the first and second threaded through bores as coaxial</p>
<p>a screw comprising a head and a shank, the head being at one end of the shank and the shank having a threaded portion at a second end opposite the first end and a clearance portion between the threaded portion and the head, the screw being configured so that with a threaded engagement between the threaded portion of the shank and either of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second threaded through bores.</p>	<p>Page 5, line 24 to Page 6, line 9 Fig 3: 22 (screw); 26 (head); 24 (shank); 28 (threaded portion); 30 (clearance portion) Fig 4A (threaded engagement, head abutment, clearance portion within bore) Fig 4B (threaded engagement to either threaded bore)</p>
<p>2. The symmetric clamp structure of claim 1 wherein the clearance portion has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore.</p>	<p>Page 5, lines 28 to Page 6, line 2 Fig 4A: 30 (clearance portion) Figs 4B</p>
<p>3. The symmetric clamp structure of claim 1 wherein a length of the clearance portion exceeds an axial length of each threaded bore.</p>	<p>Page 5, lines 28 to Page 6, line 2 Fig 4A: 30 (clearance portion) Fig 4B</p>
<p>4. The symmetric clamp structure of claim 1 wherein each of the first and second arms have a proximal end attached to a bicycle component.</p>	<p>Page 5, lines 15-16 Fig 1: 12 (clamp); 10 (brake lever) Fig 2: 12 (clamp); 10 (brake lever)</p>
<p>5. The symmetric clamp structure of claim 4 wherein the bicycle component is a brake lever.</p>	<p>Page 5, lines 15-16 Fig 1: 12 (clamp); 10 (brake lever) Fig 2: 12 (clamp); 10 (brake lever)</p>

<p>6. A method of attaching a clamp to a frame comprising: providing a frame; providing a symmetric clamp structure comprising a first arm having a distal end defining a first threaded bore, a second arm having a distal end defining a second threaded bore wherein the first threaded bore and the second threaded bore are essentially coaxial and have essentially the same size and pitch threading;</p>	<p>Page 5 lines 15-18; Fig 2: 12 (clamp); 13 (handlebar or frame) Page 5, lines 19-24 Page 6, line 27-28 Fig 2: 12 (clamp) Fig 3: 14 (first arm); 16 (second arm); 18 (first threaded through bore); 20 (second threaded through bore) Figs 3-4B: illustrate the first and second threaded through bores as coaxial</p>
<p>providing a screw comprising a head and a shank, the head being at one end of the shank and a threaded portion being at a second end of the shank opposite the first end, the threaded portion being sized to threadably engage both the first and second threaded bores, the shank further comprising a clearance portion between the threaded portion and the head; engaging the screw with the clamp by screwing the threaded portion into a threaded engagement with either of the first and second bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement;</p>	<p>Page 5, line 24 to Page 6, line 9 Fig 3: 22 (screw); 26 (head); 24 (shank); 28 (threaded portion); 30 (clearance portion) Fig 4A (threaded engagement, head abutment, clearance portion within bore) Fig 4B (threaded engagement to either threaded bore)</p>
<p>placing the clamp over the frame so that the frame is received between the first and second arms of the clamp; and tightening the screw thereby driving the distal ends of the first and second arms toward each other, thereby attaching the clamp to the frame.</p>	<p>Page 5 lines 16-18; Page 6, lines 3-9 Fig 2: 12 (clamp); 13 (handlebar)</p>
<p>7. The method of claim 6 wherein the frame is a tubular bicycle frame.</p>	<p>Page 5: lines 15-18 Fig 2: 13 (frame)</p>

8. The method of claim 6 wherein the frame is a tubular bicycle handlebar.	Page 5: lines 15-18 Fig 2: 13 (handlebar)
9. The method of claim 6 further comprising removing the screw from threaded engagement with either of the first and second arms and engaging and tightening the screw in an opposite orientation such that the screw is threadably engaged with the other arm.	Page 6, lines 3-9 Fig 4A, Fig 4B (threaded engagement to either threaded bore)
10. A method of manufacturing a symmetrical clamp structure comprising: providing a clamp body having a first arm having a distal end and a second arm having a distal end with the distal end of the first arm and the distal end of the second arm being substantially adjacent to each other and defining a gap between the arms;	Page 6, lines 23-25 Fig 1: 32 (clamp body) Fig 4A: 14 (first arm); 16 (second arm) Fig 3: 34 (gap) Figs 3-4B: illustrate distal end of first arm and distal end of second arm substantially adjacent to each other and defining a gap between the arms
forming co-axial cylindrical threaded bores through the distal ends of the first and second arms, each threaded bore having a length less than a select length; providing a screw having a head at one end and a threaded shank extending from the head to an opposite end with the threaded shank being sized to threadably engage the threaded bores through the distal ends of the first and second arms; forming a clearance portion on the shank of the select length between the head and the opposite end of the shank such that the clearance portion extends toward but not to the opposite end, leaving a portion of the shank opposite the head threaded;	Page 5, lines 20-28 Page 6, line 23 to Page 7, line 3 Fig 3: 14 (first arm); 16 (second arm); 18 (first bore); 20 (second bore); 22 (screw); 26 (head); 28 (threaded shank); 30 (clearance portion) Fig 4A (threaded engagement) Figs 3-4B: illustrate the first and second threaded through bores as coaxial Figs 3-4B: further illustrate each threaded bore having a length less than a select length and clearance portion on shank having the select length
assembling the clamp by threadably engaging the screw with either of the first and second threaded bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement.	Page 5, line 25 to Page 6, line 9 Fig 4A (threaded engagement, head abutment, clearance portion within bore) Fig 4B (threaded engagement to either threaded bore)

<p>11. A bicycle brake lever comprising: a housing; a lever pivotably attached to the housing; a clamp attached to the housing, the clamp comprising:</p>	<p>Page 5, lines 15-18 Fig 2: 10 (bicycle lever); 12 (clamp)</p>
<p>first and second arms configured to receive a bicycle handlebar axially therebetween, each of the first and second arms having a distal end, the distal ends having a space therebetween, the first arm further having a first threaded through bore at its distal end and the second arm further having a second threaded through bore at its distal end, the first and second threaded through bores being essentially coaxial; and</p>	<p>Page 5, lines 15-24 Fig 1: 14 (first arm); 16 (second arm) Fig 2: 13 (handlebar); illustrates first and second arms configured to receive a bicycle handlebar axially therebetween Fig 3: 18 (first threaded through bore); 20 (second threaded through bore); 34 (gap) Figs 3-4B: illustrate the first and second threaded through bores as coaxial</p>
<p>a screw comprising a head and a shank, the head being at one end of the shank and the shank having a threaded portion at a second end opposite the first end and a clearance portion between the threaded portion and the head, the screw being configured so that with a threaded engagement between the threaded portion of the shank and either of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first or second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second threaded through bores, such that there is no threaded engagement between the threaded portion of the shank and the other of the first and second threaded through bores.</p>	<p>Page 5, line 24 to Page 6, line 9 Fig 3: 22 (screw); 26 (head); 24 (shank); 28 (threaded portion); 30 (clearance portion) Fig 4A (threaded engagement, head abutment, clearance portion within bore) Fig 4B (threaded engagement to either threaded bore)</p>
<p>12. The bicycle brake lever of claim 11 wherein the clearance portion has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore.</p>	<p>Page 5, line 28 to Page 6 line 2 Fig 4A, Fig 4B (clearance portion within bore has length at least equal to axial length of each threaded bore)</p>

13. The bicycle brake lever of claim 11 wherein a length of the clearance portion exceeds an axial length of each threaded bore.	Page 5, line 28 to Page 6 line 2 Fig 4A, Fig 4B (clearance portion exceeds axial length of each threaded bore)
14. The symmetric clamp structure of claim 1 further comprising the clearance portion being non-threaded.	Page 5, line 28 to Page 6 line 2 Page 7, lines 14-15 Fig 4A, Fig 4B (clearance portion being non-threaded)
15. The method of claim 6 further comprising the clearance portion being non-threaded.	Page 5, line 28 to Page 6 line 2 Page 7, lines 14-15 Fig 4A, Fig 4B (clearance portion being non-threaded)
16. The method of claim 10 further comprising the clearance portion being non-threaded.	Page 5, line 28 to Page 6 line 2 Page 7, lines 14-15 Fig 4A, Fig 4B (clearance portion being non-threaded)
17. The bicycle brake of claim 11 further comprising the clearance portion being non-threaded.	Page 5, line 28 to Page 6 line 2 Page 7, lines 14-15 Fig 4A, Fig 4B (clearance portion being non-threaded)

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

The final Office Action was mailed November 16, 2007. Applicant appeals the following final rejections:

The rejection of claim 10 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The rejection of claims 1, 4, 6, 7, 8-10 and 14-16 under 35 U.S.C. § 102(b) as being anticipated by Nielsen, U.S. Patent No. 6,186,027.

The rejection of claims 2 and 3 under 35 U.S.C. § 103(a) as being unpatentable over Nielsen, U.S. Patent No. 6,186,027, in view of Steinbock, U.S. Patent No. 6,381,827.

The rejection of claims 2 and 3 under 35 U.S.C. § 103(a) as being unpatentable over Gelbein, U.S. Patent No. 5,584,210, in view of Nielsen, U.S. Patent No. 6,186,027, and further in view of Steinbock, U.S. Patent No. 6,381,827.

The rejection of claims 1, 4, 5, 11 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Gelbein, U.S. Patent No. 5,584,210, in view of Nielsen, U.S. Patent No. 6,186,027.

The rejection of claims 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Gelbein, U.S. Patent No. 5,584,210, in view of Nielsen, U.S. Patent No. 6,186,027, and further in view of Steinbock, U.S. Patent No. 6,381,827.

VII. ARGUMENT

A. Summary of the Argument

None of the references cited by the Examiner, Nielsen, U.S. Patent No. 6,186,027, Steinbock, U.S. Patent No. 6,381,827, or Gelbein, U.S. Patent No. 5,584,210, teach a clamp, method for attaching a clamp to a frame, a method of manufacturing a symmetrical clamp structure or a bicycle brake lever as recited in claims 1, 6, 10 and 11, respectively. In particular, none of these references alone nor in combination teach a clamp or method of making a clamp wherein the clamp has a first arm defining a first threaded through bore at its distal end and a second arm having a second threaded through bore at its distal end, with the first and second threaded through bores being essentially coaxial and a screw comprising a head and a shank, with the shank having a threaded portion opposite the head and a clearance portion between the head and the threaded portion with the screw configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the clearance portion resides in the other of the first and second threaded through bores. In other words, no combination of the references teaches a clamp structure where a screw as described above can be selectively inserted in *either* of the first and second through bores and still perform a clamping function.

B. The Rejection of Claim 10 under 35 U.S.C. § 112

1. **Statement of the Relevant Law Pertaining to 35 U.S.C. § 112**

35 U.S.C. § 112 provides:

"The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as the invention."

2. **The Rejection of Claims 10 under 35 U.S.C. § 112 Is Improper**

As best understood, the Examiner maintains the limitation "each threaded through bore having a length less than a select length" renders claim 10 indefinite because the specification

does not define “a select length” such that one of ordinary skill in the art would be able to ascertain the scope of the claim. Contrary the position of the Examiner, claim 1 itself makes clear what is meant by a “select length.” The term “select length” is used to identify the relationship between the length of the threaded through bores and the clearance portion. Claim 10 recites that each threaded bore has “a length less than a select length” and further subsequently recites having a clearance portion on the shank of a screw “of the select length.” Thus, one of skill in the art would immediately recognize claim 1 is reciting a screw having a clearance portion of a select length that is greater than a length of the threaded through bore. This feature is clearly illustrated in Figs. 4A and 4B and one of skill in the art readily would understand that having a clearance portion of a select length greater than the length of the threaded through bore enables the clamp arms 14, 16 to be drawn together as the screw is tightened when deployed as illustrated in Figs. 4A and 4B. Accordingly, Applicant respectfully submits rejection of claim 10 under 35 USC § 112 is improper.

C. The Rejection of Claims 1, 4, 6, 8-10, 14-16 under 35 U.S.C. § 102(b)

1. **Statement of the Relevant Law Pertaining to 35 U.S.C. § 102(b)**

35 U.S.C. § 102(b) provides:

“A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.”

To anticipate a claim, a 102(b) reference must teach every element of the claim. “The claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Anticipation requires the presence in a single prior art reference disclosure of every element of the claimed invention. See, e.g., *Great Northern Corp. v. Davis Core & Pad Co.*, 782 F.2d 159, 165, 228 U.S.P.Q. (BNA) 356, 358 (Fed. Cir. 1986); *Lindemann Maschinenfabrik v. American Hoist and Derrick*, 730 F.2d 1452, 221 U.S.P.Q. (BNA) 481 (Fed. Cir. 1984).

2. **The Rejection of Claims 1, 4, 6, 7, 8-10 and 14-16 under 35 U.S.C. § 102(b) Is**

Improper

Claim 1, and its dependent claims, claims 4 and 14

Claim 1 requires a clamp having a first arm defining a first threaded through bore and a second arm defining a second threaded through bore, with the first threaded through bore and the second threaded through bore being essentially coaxial. Claim 1 further requires a screw having a head and a shank with the shank having a threaded portion opposite the head and a clearance portion between the threaded portion and the head. The screw is configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second threaded through bores.

The Examiner appears to rely primarily on Fig. 3 of Nielsen in formulating his § 102(b) rejection. While Fig. 3 clearly shows first and second arms 42A, 42B with axially aligned through bores, only the through bore in the second arm 42B is shown as threaded. The Examiner relies on language at column 3, lines 25-28 to support the first through bore in the first arm 42A as being threaded. Nielsen reads at column 3, lines 25-28 as follows:

“As shown in FIG. 3, the hole in lug 42B is threaded to mate with the threaded shank of screw 40. The hole in lug 42A may but need not be threaded, but is sized so that screw 40 can be rotated therein.”

The bolt 40 illustrated in Fig. 3 is a conventional bolt where threads are formed in a threaded portion having an outer diameter equal to an outer diameter of a non-threaded portion of the shaft. This non-threaded portion of the shaft is adjacent the head of the bolt 40 depicted in Fig. 3. In order for the bolt 40 to be fully received in the axially aligned hole in the first arm 42A, this hole must have an inner diameter greater than the outer diameter of the threaded portion and the non-threaded portion of the bolt 40. Accordingly, if, as suggested in the specification, the hole 42A is threaded, the inner diameter of the threads would have to clear the non-threaded portion of the bolt if the structure is to function as a clamp configuration indicated in Fig. 3. However, in such a configuration the threaded portion of the bolt would necessarily have to clear the threads in 42A without threaded engagement. (This is because as discussed above, the non-threaded portion and the threaded portion of bolt 40 have the same outer diameter.) Thus, the structure taught in Nielsen would not function as a clamp if the bolt 40

were inserted through the second threaded through bore 42B for at least two reasons. First, the threads of the bolt have an outer diameter less than the inner diameter of the threads in the hole 42A and there would thus not be threaded engagement between the threaded portion of the bolt 40 and the threads of 42A. Second, the non-threaded portion of the bolt 40 would interfere with the threads of the second threaded through bore in 42B such that the bolt could only be screwed into threaded through bore 42B up to the point of the non-threaded portion. Accordingly, modification of Fig. 3 as suggested by the Examiner in light of the specification would not meet the limitations of claim 1. Specifically, Nielsen fails to teach a screw configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the threaded portion resides within the other of the first and second threaded through bores. In other words, while the limitations can be met in part by insertion of the bolt 40 to a threaded hole in 42A as depicted in Fig. 3, it would not be insertable in the second threaded through bore of the second arm 42B in a manner meeting the limitations of claim 1.

It should further be noted that if the hole in 42A had threads of the same inner diameter and pitch as the threads in the hole in the second arm 42B, these limitations would also not be met. This is because, as described above with regard to insertion in the threaded bore 42B, the non-threaded portion of the bolt 40 would interfere with such threads 42A and prevent the head of the bolt 40 from abutting the arm 42A or the arm 42B.

Accordingly, for at least these reasons, Nielsen does not anticipate claim 1.

Claims 4 and 14, which are dependent from claim 1, are not anticipated by Nielsen for the same reasons set forth above with regard to claim 1.

Claim 6, and its dependent claims, claims 8, 9 and 15

Claim 6 is not anticipated by Nielsen for essentially the same reasons set forth above with regard to claim 1. The critical limitation in claim 6 is as follows:

“engaging the screw with the clamp by screwing the threaded portion into a threaded engagement with *either* of the first and second bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement” (emphasis added)

As discussed above with regard to claim 1, Nielsen does not teach, expressly or inherently, a structure that would allow the screw to be in threaded engagement with *either* of the first and second bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement. In short, the non-threaded portion of the bolt 40 could not be threaded into threaded bore 42B so that these limitations of claim 6 would be met.

Claims 8 and 15 are dependent from claim 6 and are not anticipated for at least the reasons set forth above with regard to claim 6.

Claim 9 is dependent from claim 6 and further recites removing the screw from threaded engagement with *either* of the first and second arms and engaging and tightening the screw in an opposite orientation such that the screw is threadably engaged with the other arm. Claim 9 is thus not anticipated for the same reasons set forth above with regard to claim 6, and moreover because as discussed above with respect to Nielsen, the screw 40 could not be removed after insertion in the first threaded hole of arm 42A and threaded engagement in the second threaded hole of 42B and then inserted in the hole of 42B for threaded engagement with the hole of 42A.

Claim 10 and 16

Independent claim 10, which is directed to a method of manufacturing a symmetrical clamp structure, is not anticipated by Nielsen for the same reasons set forth above with regard to claim 1. Specifically, claim 10 includes the limitation of assembling the clamp by threadably engaging the screw with *either* of the first and second threaded bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement.

Claim 10 also requires forming co-axial cylindrical threaded bores through the distal ends of the first and second arms, with “each threaded bore having a length less than a select length.” Claim 10 further recites forming a clearance portion on the shank “of the select length.” In other words, claim 10 requires forming a clearance portion of a length greater than a length of the threaded bores. Referring to Fig. 3 of Neilsen, a non-threaded portion of the bolt 40, which the Examiner argues is a “clearance portion,” is depicted with a length less than the length of the bores in 42A or 42B. Thus, Nielsen fails to teach this limitation as well.

Claim 16, which is dependent from claim 10, is not anticipated for the same reasons set forth above with regard to claim 10.

D. The Rejection of Claims 5-7, 20 and 22-23 under 35 U.S.C. § 103(a)

1. **Statement of the Relevant Law Pertaining to 35 U.S.C. § 103(a)**

The proper standard for rejection of claims under 35 U.S.C. § 103(a) is whether the differences between the claimed subject matter and the prior art are such that the claimed subject matter would have been obvious to one of ordinary skill in the art at the time the invention was made. In *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 U.P.S.Q.2d (BNA) 1385 (2007), the United States Supreme Court confirmed the following basic obviousness analysis:

In evaluating whether or not an invention is obvious, inquiry into the following three factors must be made:

1. The scope and content of the prior art;
2. The level of ordinary skill in the prior art; and
3. The differences between the claimed invention and the prior art.

See *Graham v. John Deere Co.*, 383 U.S. 1; 86 S. Ct. 684; 15 L. Ed. 2d 545; 148 U.S.P.Q. (BNA) 459 (1966).

The Examiner bears the burden of presenting an unrebutted *prima facie* case of obviousness in order to reject claims under 35 U.S.C. § 103(a). See *In re Deuel*, 51 F.3d 1552, 1557; 34 U.S.P.Q.2d (BNA) 1210 51 F.3d 1552 (Fed. Cir. 1995). Thus an applicant on appeal to the Board may overcome the 35 U.S.C. § 103(a) rejection by showing that the Examiner provided insufficient evidence of *prima facie* obviousness.

The Supreme Court confirmed in the *KSR* opinion that a patent examiner or court must articulate a rationale for combining *known elements* from the prior art to formulate an obviousness rejection. The Supreme Court states,

*“Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006)”* KSR at 127 S.Ct. 1740-1741.

Thus, though the Supreme Court has jettisoned the “teaching, suggestion, motivation” rubric, an examiner must still identify a viable reason why a person of ordinary skill would have been led to modify the teachings of a reference to arrive at the Applicant’s claimed invention. *Ex parte Penhasi*, BPAI Appeal No. 2007-2534 (December 13, 2008).

2. Summary of Argument Concerning 35 U.S.C. § 103(a)

While the Examiner has been able to select references showing in isolation various elements of the claimed combinations in the various claims, the Examiner has not articulated and indeed cannot articulate a viable reason why a person of ordinary skill in the art would have been lead to combine the teachings of the cited references in a manner resulting in Applicant’s claimed invention. Moreover, the Examiner has not shown each of the recited elements in the prior art.

3. The Rejection of Claims 2 and 3 under 35 U.S.C. § 103(a) Is Improper

Claims 2 and 3 are dependent from claim 1. Claim 2 recites the clearance portion of claim 1 has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore. Claim 3 recites a length of the clearance portion exceeds an axial length of each threaded bore.

As discussed above with regard to the rejection of claim 1 under 35 USC § 102(b), Nielsen fails to teach a clamp having axially aligned threaded through bores and a screw configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other arm, the clearance portion resides within the other of the first and second threaded through bores. Steinbock does not provide a teaching of these missing elements. Steinbock, which is directed to a method for maintaining a clamping force between bolted parts in high temperatures, uses an elongated fastener 20 with threaded portions 22, 24 at opposite ends of the shank separated by a reduced diameter portion indicated at reference 23. As best understood, the significance of the reduced diameter portion is not the function it performs itself, which is that the reduced diameter portion can fit within a smaller diameter orifice, but that a larger diameter threaded portion 24 is provided which allows a large sheer area where the fastener is threadably engaged with the internal threads 26 in the flange 14.

Thus, rather than teaching the desirability of a reduced diameter portion, Steinbock is teaching the advantage of increasing the diameter of a threaded portion to increase the sheer area at the point of threaded engagement. The Examiner fails to indicate why this teaching would motivate a person of skill in the art to provide a clamp structure with two opposing threaded bores and screw having a clearance portion between a head and a threaded portion configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other, a clearance portion resides in the other of the first and second threaded through bores. Indeed, referring to Figs. 2-8 of Steinbock, the purported reduced diameter portion of the shaft 23 does not reside within a threaded bore. In summary, the Examiner has not identified and cannot articulate a reason why one skilled in the art would have modified the teachings of Nielsen in view of Steinbock to yield the invention recited in claim 1.

Claim 2 requires the clearance portion have an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore. Neither of these elements is taught by Nielsen. The “clearance portion” 23 of Steinbock does not appear to be intended to have a length greater than the internal threads 26 illustrated in Figs. 2-7. In any event, while this teaching may arguably be derived from Fig. 8, there is no articulated reason why one of skill in the art would have provided a reduced diameter to the non-threaded portion of the bolt 40 of Nielsen and locate such a clearance portion within the first or second threaded through bores. At page 7 of the final Office Action, the Examiner’s statement that “Steinbock teaches that the length of the clearance portion (20) exceeds an axial length of each threaded bore for the purpose of allowing a large sheer area which can prevent stripping of the threads”, citing column 5, lines 35-42 of Steinbock, contained at page 7, simply is not true. As discussed above, the cited language pertains to the advantage of having an enlarged threaded portion 24 which provides a large sheer area. Taking the Examiner’s argument to its logical extreme, the sheer area could be increased by having the reduced diameter portion extend to only a single thread on the shaft to purportedly maximize the sheer area, but common sense of course dictates that it would in fact minimize the sheer area and lead to failure of the clamp taught in Steinbock.

Reference to Gelbein at page 7 of the final Office Action does not remedy the deficiencies of Steinbock and Nielsen, and in fact the Examiner does not even so argue.

4. The Rejection of Claims 1, 4, 5, 11 and 17 under 35 U.S.C. § 103(a) Is Improper

The Examiner's statement of the purported teaching of Gelbein, U.S. Patent No. 5,584,210, is set forth at the eighth page of the final Office Action. Applicant does not contest the Examiner's position with regard to what Gelbein teaches and what Gelbein fails to disclose. In particular, as admitted by the Examiner, Applicant notes that Gelbein does not disclose coaxial first and second threaded through bores or a screw having a clearance portion between a threaded portion and a head and the screw being configured so that with a threaded engagement between the threaded portion of the shank and *either* of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the clearance portion resides in the other of the first and second threaded through bores.

The Examiner contends that these elements are taught by Nielsen. However, as discussed above with respect to rejection of claim 1 under 35 USC § 102(b), Nielsen does not teach these elements. In essence, there is no teaching that the bolt 40 of Nielsen can be threadably engaged with *either* the threaded bore in 42A or 42B with clearance portion residing in the other threaded portion.

Moreover, the Examiner fails to articulate a reason why or even how one of ordinary skill in the art could modify the device of Gelbein to provide a second threaded through bore which is essentially coaxial with the first threaded through bore. As characterized by the Examiner, this would require, for example, first arm (right side of element 32) being broken off and moved along an axis corresponding to the hole 56 of the second arm (the left side of 32). This would defy common sense and would allow only one of the "arms" to engage a handle bar or other frame portion and would thus defeat the purpose of providing the two coaxial clamping elements shown in Gelbein.

Regarding claim 4, in the context of the claims, a "proximal" end means an end attached to body and a "distal" end means an end that is free from the body. Referring to Fig. 3 of Gelbein, the axial bores appear to be on the proximal end of what is characterized as the first and second arms of Gelbein. Thus, Gelbein would not teach the first and second threaded bores

being at the distal end of the first and second arms of the clamp as required in claim 1.

Accordingly, the elements of claim 4 are not taught by any combination of Gelbein and Nielsen.

Claim 5 is not obvious for the same reasons discussed above with respect to claims 1 and 4.

Regarding independent claim 11, it requires, like claim 1, first and second arms with the first arm having a first threaded through bore and a second arm having a second threaded through bore with the first and second threaded through bores being essentially coaxial. As discussed above with regard to claims 1 and 4, the structure of Gelbein would have to be severely modified in order to align the bores of the first and second arms (as characterized by the Examiner). Besides the Examiner failing to articulate why one of skill in the art would modify Gelbein to align the arms in this manner in view of Nielsen, one skilled in the art would actually be led away from reconfiguring Gelbein in this manner because such a modification of Gelbein would severely diminish the effectiveness of the clamps of Gelbein.

Regarding claim 17, which is dependent from claim 11, claim 17 would not be obvious for the same reasons set forth above with regard to claim 11.

Claims 12 and 13 stand rejected over Gelbein in view of Nielsen and in further view of Steinbock. As an initial matter, Applicants have set forth above why Gelbein in view of Nielsen fails to teach or suggest the combination of elements recited in independent claim 11, from which claims 12 and 13 depend. Furthermore, as discussed above with respect to claims 2 and 3, Steinbock does not provide any teaching that the length of the clearance portion 20 should exceed an axial length of *each* threaded through bore. The Examiner is simply wrong that Steinbock teaches at column 5, lines 35-42 providing a clearance portion 20 with a length that exceeds an axial length of each threaded bore allows for “a large sheer area which can prevent stripping of the threads (column 5, lines 35-42)”. As pointed out above, what Steinbock is really teaching is providing an increased outer diameter of a threaded portion provides a large sheer area and Steinbock in no way relates the length of the clearance portion to a large sheer area provided by threads.

VIII. CLAIMS APPENDIX

1. A clamp comprising:
a first arm having a distal end defining a first threaded through bore;

a second arm having a distal end defining a second threaded through bore, wherein the first threaded through bore and the second threaded through bore are essentially coaxial; and

a screw comprising a head and a shank, the head being at one end of the shank and the shank having a threaded portion at a second end opposite the first end and a clearance portion between the threaded portion and the head, the screw being configured so that with a threaded engagement between the threaded portion of the shank and either of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first and second arms opposite the threaded engagement, the clearance portion resides within the other of the first and second threaded through bores.

2. The symmetric clamp structure of claim 1 wherein the clearance portion has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore.

3. The symmetric clamp structure of claim 1 wherein a length of the clearance portion exceeds an axial length of each threaded bore.

4. The symmetric clamp structure of claim 1 wherein each of the first and second arms have a proximal end attached to a bicycle component.

5. The symmetric clamp structure of claim 4 wherein the bicycle component is a brake lever.

6. A method of attaching a clamp to a frame comprising:

providing a frame;

providing a symmetric clamp structure comprising a first arm having a distal end defining a first threaded bore, a second arm having a distal end defining a second threaded bore wherein the first threaded bore and the second threaded bore are essentially coaxial and have essentially the same size and pitch threading;

providing a screw comprising a head and a shank, the head being at one end of the shank and a threaded portion being at a second end of the shank opposite the first end, the threaded portion being sized to threadably engage both the first and second threaded bores, the shank further comprising a clearance portion between the threaded portion and the head;

engaging the screw with the clamp by screwing the threaded portion into a threaded engagement with either of the first and second bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement;

placing the clamp over the frame so that the frame is received between the first and second arms of the clamp; and

tightening the screw thereby driving the distal ends of the first and second arms toward each other, thereby attaching the clamp to the frame.

7. The method of claim 6 wherein the frame is a tubular bicycle frame.

8. The method of claim 6 wherein the frame is a tubular bicycle handlebar.

9. The method of claim 6 further comprising removing the screw from threaded engagement with either of the first and second arms and engaging and tightening the screw in an opposite orientation such that the screw is threadably engaged with the other arm.

10. A method of manufacturing a symmetrical clamp structure comprising:
- providing a clamp body having a first arm having a distal end and a second arm having a distal end with the distal end of the first arm and the distal end of the second arm being substantially adjacent to each other and defining a gap between the arms;
- forming co-axial cylindrical threaded bores through the distal ends of the first and second arms, each threaded bore having a length less than a select length;
- providing a screw having a head at one end and a threaded shank extending from the head to an opposite end with the threaded shank being sized to threadably engage the threaded bores through the distal ends of the first and second arms;
- forming a clearance portion on the shank of the select length between the head and the opposite end of the shank such that the clearance portion extends toward but not to the opposite end, leaving a portion of the shank opposite the head threaded;
- assembling the clamp by threadably engaging the screw with either of the first and second threaded bores such that the head abuts the arm opposite the threaded engagement and the clearance portion clears the threads of the threaded bore opposite the threaded engagement.

11. A bicycle brake lever comprising:
- a housing;
- a lever pivotably attached to the housing;
- a clamp attached to the housing, the clamp comprising:
- first and second arms configured to receive a bicycle handlebar axially therebetween, each of the first and second arms having a distal end, the distal ends having a space therebetween, the first arm further having a first threaded through bore at its distal end and the second arm further having a second threaded through bore at its distal end, the first and second threaded through bores being essentially coaxial; and
- a screw comprising a head and a shank, the head being at one end of the shank and the shank having a threaded portion at a second end opposite the first end and a clearance portion between the threaded portion and the head, the screw being configured so that with a threaded engagement between the threaded portion of the shank and either of the first threaded through bore of the first arm or the second threaded through bore of the second arm and the head abutting the other of the first or second arms opposite the threaded engagement, the clearance portion

resides within the other of the first and second threaded through bores, such that there is no threaded engagement between the threaded portion of the shank and the other of the first and second threaded through bores.

12. The bicycle brake lever of claim 11 wherein the clearance portion has an outer diameter sized to clear the first and second threaded bores and a length at least equal to the axial length of each threaded bore.

13. The bicycle brake lever of claim 11 wherein a length of the clearance portion exceeds an axial length of each threaded bore.

14. The symmetric clamp structure of claim 1 further comprising the clearance portion being non-threaded.

15. The method of claim 6 further comprising the clearance portion being non-threaded.

16. The method of claim 10 further comprising the clearance portion being non-threaded.

17. The bicycle brake of claim 11 further comprising the clearance portion being non-threaded.

IX. EVIDENCE APPENDIX

Enclosed please find copies of the following references relied upon by the Examiner as to the grounds of rejection to be reviewed upon appeal:

1. Nielsen, U.S. Patent No. 6,186,027.
2. Steinbock, U.S. Patent No. 6,381,827.
3. Gelbein, U.S. Patent No. 5,584,210.

X. RELATED PROCEEDINGS APPENDIX

None

XI. CLOSING REMARKS

For the foregoing reasons, Applicant submits that the rejection of claim 10 under 35 U.S.C. § 112, second paragraph is improper, that the rejection of claims 1, 4, 6, 7, 8-10 and 4-16 under 35 U.S.C. § 102(b) is improper, that the rejection of claims 2-3 under 35 U.S.C. § 103(a) is improper, that the rejection of claims 1, 4, 5, 11 and 17 under 35 USC § 103(a) is improper and that rejection of claims 12 and 13 under 35 U.S.C. § 103(a) is improper. Thus, Applicant respectfully submits that claims 1-17 are therefore patentable. Accordingly, Applicant respectfully requests that the rejections of the Examiner be reversed.

The fee associated with the filing of an Appeal Brief has been previously paid. The undersigned hereby authorizes the charge of any required fees not included or any deficiency of fees submitted herewith to be charged to deposit account number 19-5117.

Respectfully submitted,

Date: 6/17/08



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